

CLAIMS

1. Method of applying inscriptions in relief to substrates made of plastic, comprising:

- a step in which a plastic material of variable viscosity is deposited in real time in a single operation, only at those places that form the relief inscription, at a sufficient temperature to ensure a physical-chemical bond with the material comprising the substrate,

- a cooling step for the material deposited.

2. Inscription method as in claim 1, characterised by the fact that the substrate is a magnetic card.

3. Inscription method as in claim 1, characterised by the fact that the substrate is a smart card.

4. Inscription method as in claim 1, characterised by the fact that the substrate is a badge.

5. Inscription method as in claims 1 to 4, characterised by the fact that the method comprises a control step for a number (30.1 to 30.n) of vibrating elements in the form of tubes, supplied with fluidised plastic material from a reservoir (33), the vibration of these tubes being synchronised and controlled at frequencies to produce the deposition of drops of fluidised plastic material at the places necessary for a number of deposited drops to form an alphanumeric character or logo or increased thickness or any other form of raised area.

6. Inscription method as in claims 1 to 5, characterised by the fact that the relief inscription may constitute a bar code.

5 7. Inscription method as in claims 1 to 5, characterised by the fact that the relief inscription may constitute other codes carrying information concerning the substrate or the user of the substrate

10 8. Inscription method as in claims 1 to 7, characterised by the fact that the control of the deposition of the drops is effected as a function of the speed at which the substrates pass by in front of the ends of the print heads (30.1 to 30.n).

15 9. Inscription method characterised by the fact that it incorporates a means (1) of moving the substrate (21), made of plastic, in front of a print station (3) equipped with a number of nozzles (30.3 to 30.n) which eject drops
20 of plastic material of variable viscosity, the said drops forming relief points on the substrate, with the ejector nozzles being fitted with a means (4) of controlling the positioning of the drops in a direction transverse to that of the movement of the substrates, and also a means
25 of controlling the ejection duration of each drop as a function of both the speed of travel of the substrates and the data constituting the inscription.

10. Device as in claim 9, characterised by the fact that
30 it includes a cooling station (5) for the fluidised plastic material.

11. Device as in claims 9 or 10, characterised by the fact that the deposition station (4) includes a control unit (4) connected both to the means of controlling the transfer speed of the substrates (20) in front of the inscription station (3), and to each of the ejector
5 nozzles (30.1 to 30.n) for fluidised plastic material.

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